

REMARKS

Claims 8, 19, 22, and 54 have been amended. Claims 1-6, 9-17, and 23-51 were previously canceled. Accordingly, claims 7, 8, 18-22, 52-54 and 56-61 are pending in this application.

In the June 7, 2006, Office Action, all of the pending claims were rejected. More specifically, the status of the application in light of the Office Action is as follows:

(A) Claims 7, 18, 20, 21, 52, 53, 56, 58, 60 and 61 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0022440 ("Kunugi"); and

(B) Claims 8, 19, 22, 54, 57 and 59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kunugi in view of U.S. Patent No. 6,439,977 ("Quek").

A. **Response to Section 102 Rejections**

Claims 7, 18, 20, 21, 52, 53, 56, 58, 60 and 61 are patentable over Kunugi because this reference does not qualify as prior art under 35 U.S.C. § 102(e). As set forth in the enclosed Declaration of Michael J. Joslyn under 37 C.F.R. § 1.131, Mr. Joslyn invented the claimed subject matter before the filing date of Kunugi. More specifically, Mr. Joslyn conceived of the claimed subject matter before April 3, 2001, and diligently pursued preparing and filing the U.S. Patent Application No. 09/939,430 (the parent of this divisional application) to constructively reduce the invention to practice on August 24, 2001. Because Kunugi is not prior art against these claims, and for the additional features of these claims, the rejection of these claims over Kunugi should be withdrawn.

B. **Response to Section 103 Rejections**

Claims 8, 19, 22, 54, 57 and 59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kunugi in view of Quek. As described below, the rejection of these claims should be withdrawn because the combination of Kunugi and Quek does not teach or suggest all of the features of these claims.

(1) Claim 8 is Directed Toward a Planarizing Machine With a Nozzle Movable Between a First Position to Discharge Planarizing Solution at a First Angle and a Second Position to Discharge Planarizing solution at a Second Angle

Amended claim 8 is directed toward a planarizing machine that includes a table having a support surface, a processing pad on the support surface, a carrier assembly having a head configured to hold a microelectronic workpiece, and a drive assembly carrying the head relative to the support surface. The planarizing machine further includes a solution dispenser separate from the head. The solution dispenser is configured to discharge a planarizing solution onto a plurality of locations on the pad. The solution dispenser includes a support extending over the pad at a location spaced apart from a travel path of the head, a fluid passageway carried by the support through which a planarizing solution can flow, and a nozzle carried by the support and in fluid communication with the fluid passageway. The nozzle is rotatably coupled to the support to be movable between a first position to discharge the planarizing solution at a first angle relative to a surface of the pad and a second position to discharge the planarizing solution at a second angle relative to the surface of the pad. The second angle is different from the first angle.

(2) Kunugi Discloses a Slurry-Supply Mechanism With a Nozzle Configured to Slide Along a Guide Bar

The slurry-supply mechanism in Kunugi has a guide bar that supports nozzles above a polishing pad of a wafer polishing device (¶¶ 23, 24, and 32; Figures 1A, 1b, and 3-6). The guide bar extends above the polishing pad in a radial direction across the pad (¶¶ 23, 24, and 32; Figures 1A, 1B, and 3-6). The nozzles are slidable along the guide bar during the polishing operation to drop slurry onto various radial locations of the polishing pad (¶¶ 23, 24, 27, 29, and 32; Figures 1A, 1B, and 3-6). In Kunugi, the position of the nozzles and the volume of fluid pumped to the nozzles are used to control the amount of slurry delivered to various radial locations of the polishing pad to permit uniform polishing (Abstract; ¶¶ 12-14, 23-28, and 33; Figures 1A and 1B). Kunugi does not teach or suggest a nozzle rotatably coupled to a support to be movable between a first position to discharge the planarizing solution at a first angle and a second position to discharge the planarizing solution at a second angle.

(3) Quek Discloses a Slurry Distribution Apparatus With a Rotating Nozzle That Delivers Slurry at a Single Fixed Angle

The slurry distribution apparatus in Quek has a rotating section with an opening through which slurry flows via gravity feed (col. 3, line 65 – col. 4, line 22). The opening is provided at a fixed angle so that the slurry is evenly distributed across the entire face of a polishing pad as the rotating section rotates (abstract; col. 2, lines 51-53; col. 3 lines 3-9; col. 3, line 65 – col. 4, line 22). The fixed angle can be selected and designed to suit a particular application (col. 4, lines 10-22). Accordingly, the nozzle in Quek delivers the slurry to the polishing pad at a fixed angle and does not teach or suggest a nozzle rotatably coupled to a support to be movable between a first position to discharge the planarizing solution at a first angle and a second position to discharge the planarizing solution at a second angle.

(4) Kunugi and Quek Fail to Teach or Suggest, Among Other Features, a Planarizing Machine With a Nozzle Movable Between a First Position to Discharge Planarizing Solution at a First Angle and a Second Position to Discharge Planarizing solution at a Second Angle

Kunugi and Quek fail to teach or suggest the combination of elements set forth in claim 8. For example, the combination of Kunugi and Quek does not teach or suggest a nozzle that is rotatably coupled to a support to be movable between a first position to discharge planarizing solution at a first angle relative to a surface of the pad and a second position to discharge the planarizing solution at a second angle relative to the surface of the pad, wherein the second angle is different from the first angle. In Kunugi, the nozzles slide along a guide bar that extends radially above a polishing pad to drop slurry onto various radial locations of the polishing pad and do not rotate. In Quek, the rotating nozzle is fixed at a single angle to distribute fluid evenly across an entire polishing pad. Accordingly, the combination of Kunugi and Quek does not teach or suggest a nozzle that is rotatably coupled to a support to be movable between a first position to discharge planarizing solution at a first angle relative to a surface of the pad and a second position to discharge the planarizing solution at a second angle relative to the surface of the pad, wherein the second angle is different from the first angle, as recited in claim 8.

Furthermore, a person skilled in the art would not be motivated to modify Kunugi to include the rotating nozzle of Quek, because the combination of these references would destroy

the purpose of Kunugi. In Kunugi, the position of the nozzles and the volume of fluid pumped to the nozzles are used to control the amount of slurry delivered to various radial locations of the polishing pad in order to accomplish uniform polishing. The rotating nozzle in Quek distributes slurry across the entire polishing pad and would not allow the Kunugi mechanism to control the amount of fluid delivered to the various radial locations. Accordingly, a person skilled in the art would not be motivated to combine these two references because in so doing, the purpose of Kunugi would be destroyed.


Therefore, for at least these reasons, the Section 103 rejection of claim 8 should be withdrawn. Amended claims 19, 22, and 54 include, *inter alia*, features similar to claim 8. For at least this reason, the Section 103 rejection of these claims should also be withdrawn. Claim 57 depends from claim 8 and claim 59 depends from claim 19, respectively. For at least this reason, the rejection of claims 57 and 59 should also be withdrawn.

In view of the foregoing, the pending claims comply with 35 U.S.C. § 112 and are patentable over the applied art. The applicant accordingly requests reconsideration of the application and a Notice of Allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-6477.

Respectfully submitted,

Perkins Coie LLP

Date: 7 September 2006



Tim R. Seeley
Registration No. 53,575

Correspondence Address:

Customer No. 46844
Perkins Coie LLP
P.O. Box 1247
Seattle, Washington 98111-1247
(206) 359-8000